

CLAIMS:

1. Ceramic gas tight high-pressure burner (1) comprising an ionisable filling, characterized in,
that said ceramic gas tight high-pressure burner (1) comprises a discharge vessel (2) having a discharge cavity (3) with a volume in the range of 3 mm^3 to 30 mm^3 , whereby
5 the internal filling pressure of the discharge cavity (3) is $\geq 0.1 \text{ MPa}$, preferably in the range from 0.5 MPa to 4 MPa , at room temperature.
2. Ceramic gas tight high-pressure burner (1) according to claim 1, characterized in,
10 that the crevice (11) can be tubular-shaped and/or has a volume of $\geq 0 \text{ mm}^3$ and $\leq 1.7 \text{ mm}^3$, preferably the crevice (11) has a volume in the range of 0 mm^3 to 1.2 mm^3 , and most preferably the crevice (11) has a volume in the range of 0 mm^3 to 0.3 mm^3 , whereby the crevice (11) has an open end facing the discharge vessel (2).
- 15 3. Ceramic gas tight high-pressure burner (1) according to claims 1 or 2, characterized in,
that the ceramic gas tight high-pressure burner (1) arranges at least one end closure device (4) comprising
- at least one connection means (10) gas tight connecting the feed-through
20 (5) to the discharge vessel (2); or
- at least one end closure member (9) having at least one feed-through-opening (12) where a feed-through (5) is arranged, whereby said end closure member (9) is directly gas tight connected to the discharge vessel (2) and the feed-through (5) is gas tight connected to the end closure member (9) by
25 connection means (10); or
- at least one end closure member (9) having at least one feed-through-opening (12), where a feed-through (5) is arranged therein, and connection means (10) gas tight connecting the end closure member (9) to the end part (7)

of the discharge vessel (2) and connection means (10) gas tight connecting the feed-through (5) to the end closure member (9).

4. Ceramic gas tight high-pressure burner (1) according to claims 1 to 3,
5 characterized in,
that said connection means (10) is / are selected from a group comprising a sealant and /
or a welding seam.
5. Ceramic gas tight high-pressure burner (1) according to claims 1 to 4,
10 characterized in,
that the end closure member (9) has at least one through-going feed-through opening
(12), whereby the through-going feed-through opening (12) cross-section varies along
the end closure member (9) in longitudinal direction.
- 15 6. Ceramic gas tight high-pressure burner according to claims 1 to 5,
whereby the outer cross-section (13) of the feed-through-opening (12) of the end closure
device (4) is \geq than the inner cross-section (14) of said feed-through-opening (12),
whereby the feed-through-opening has preferably the shape of a cylinder, a cone, an
ellipsoid, a parabola, a hyperbola, a hemisphere, a T, and/ or any combination of the
20 above mentioned.
7. Ceramic gas tight high-pressure burner according to claims 1 to 6,
characterized in,
that the end closure device (4), preferably end closure member (9) is/ are a cermet
25 material, more preferably the cermet material has a gradient.
8. Ceramic gas tight high-pressure burner (1) according to claims 1 to 7,
characterized in,
that at least one end part (7) of the discharge vessel (2) is at least partly coated with a
30 layer that improves connecting means bonding strength, whereby the layer preferably is
at least partly located between the end part (8) of the discharge vessel (2) and the end
closure device (4).

9. Lamp, comprising a ceramic gas tight high-pressure burner (1), whereby the lamp is preferably arranged in an automotive headlamp unit.
10. Method of manufacturing a ceramic gas tight high-pressure burner (1)
5 comprising:
- a) at least one end closure device (4),
 - b) at least two feed-through members (5), and
 - c) at least one discharge vessel (2) with at least one end opening (8),
- whereby the manufacturing method comprises the steps:
- 10 i) filling said discharge vessel (2) with an ionisable filling through at least one opening, and
- ii) closing said opening by arranging a feed-through (5) in said opening followed by gas tight connecting said feed-through (5) to the end closure device (4) and / or to the discharge vessel (2), whereby a gas
15 tight high-pressure burner (1) is obtained.